

FIG. 1A

atg gct agc atg tca atg tcc tat aca tgg aca ggc gcc ctg atc aca Met Ala Ser Met Ser Met Ser Tyr Thr Trp Thr Gly Ala Leu Ile Thr 1 5 10 15	48
ccg tgc gct gcg gag gaa agc aag ctg ccc atc aac gcg ctg agc aac Pro Cys Ala Ala Glu Glu Ser Lys Leu Pro Ile Asn Ala Leu Ser Asn 20 25 30	96
tcc ttg ctg cgt cac cat aac ctg gtc tat tcc aca aca tcc cgc agt Ser Leu Leu Arg His His Asn Leu Val Tyr Ser Thr Thr Ser Arg Ser 35 40 45	144
gca agc ctg cgg cag aag aag gtc acc ttt gac aga ctg caa gtc ctg Ala Ser Leu Arg Gln Lys Lys Val Thr Phe Asp Arg Leu Gln Val Leu 50 55 60	192
gac gat cat tac cgg gac gtg ctc aag gag atg aag gcg aag gcg tcc Asp Asp His Tyr Arg Asp Val Leu Lys Glu Met Lys Ala Lys Ala Ser 65 70 75 80	240
aca gtg aag gct aaa ctg cta tct gta gaa gaa gca tgc aag ctg acg Thr Val Lys Ala Lys Leu Leu Ser Val Glu Glu Ala Cys Lys Leu Thr 85 90 95	288
ccc ccg cat tcg gcc aaa tcc aaa ttt ggc tat ggg gca aag gac gtc Pro Pro His Ser Ala Lys Ser Lys Phe Gly Tyr Gly Ala Lys Asp Val 100 105 110	336
cgg agc cta tcc agc agg gcc gtt aac cac atc cgc tcc gtg tgg aag Arg Ser Leu Ser Ser Arg Ala Val Asn His Ile Arg Ser Val Trp Lys 115 120 125	384
gac ttg ctg gag gac act gac aca cca att cag acc acc atc atg gca Asp Leu Leu Glu Asp Thr Asp Thr Pro Ile Gln Thr Thr Ile Met Ala 130 135 140	432
aaa aat gag gtt ttc tgc gtc caa cca gag aaa gga ggc cgc aaa cca Lys Asn Glu Val Phe Cys Val Gln Pro Glu Lys Gly Gly Arg Lys Pro 145 150 155 160	480
gct cgc ctc atc gta ttc cca gac ctg gga gtt cgt gta tgc gag aag Ala Arg Leu Ile Val Phe Pro Asp Leu Gly Val Arg Val Cys Glu Lys 165 170 175	528
atg gcc ctt tac gac gtg gtt tcc act ctt cct cag gcc gtg atg ggc Met Ala Leu Tyr Asp Val Val Ser Thr Leu Pro Gln Ala Val Met Gly 180 185 190	576
tcc tca tac gga ttc caa tac tct cct aag cag cgg gtc gag ttc ctg Ser Ser Tyr Gly Phe Gln Tyr Ser Pro Lys Gln Arg Val Glu Phe Leu 195 200 205	624
gtg aat acc tgg aaa gca aag aaa tgc cct atg ggc ttc tca tat gac Val Asn Thr Trp Lys Ala Lys Lys Cys Pro Met Gly Phe Ser Tyr Asp 210 215 220	672

FIG. 1B

acc cgc tgt ttt gac tca acg gtc act gag aat gac atc cgt gtt gag	720
Thr Arg Cys Phe Asp Ser Thr Val Thr Glu Asn Asp Ile Arg Val Glu	
225 230 235 240	
gag tca att tac caa tgt tgt gac ttg gcc ccc gaa gct aga cag gcc	768
Glu Ser Ile Tyr Gln Cys Cys Asp Leu Ala Pro Glu Ala Arg Gln Ala	
245 250 255	
ata agg tcg ctc aca gag cgg ctc tat gtc ggg ggt ccc atg act aac	816
Ile Arg Ser Leu Thr Glu Arg Leu Tyr Val Gly Gly Pro Met Thr Asn	
260 265 270	
tcc aaa ggg cag aac tgc ggc tat cgc cgg tgc cgc gcg agc ggc gtg	864
Ser Lys Gly Gln Asn Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val	
275 280 285	
ctg acg act agc tgc ggt aat acc ctc aca tgc tac ttg aag gcc gct	912
Leu Thr Thr Ser Cys Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Ala	
290 295 300	
gca gcc tgt cga gct gcc aag ctc cag gac tgc acg atg ctc gtg aat	960
Ala Ala Cys Arg Ala Ala Lys Leu Gln Asp Cys Thr Met Leu Val Asn	
305 310 315 320	
gga gac gac ctt gtc gtt atc tgt gaa agc gcg gga acc caa gag gac	1008
Gly Asp Asp Leu Val Val Ile Cys Glu Ser Ala Gly Thr Gln Glu Asp	
325 330 335	
gcg gca agc cta cga gtc ttc acg gag gct atg act agg tac tct gcc	1056
Ala Ala Ser Leu Arg Val Phe Thr Glu Ala Met Thr Arg Tyr Ser Ala	
340 345 350	
ccc cct ggg gac ccg ccc caa ccg gaa tac gac ttg gag ctg ata aca	1104
Pro Pro Gly Asp Pro Pro Gln Pro Glu Tyr Asp Leu Glu Leu Ile Thr	
355 360 365	
tcg tgt tcc tcc aat gtg tcg gtc gca cac gat gca tct ggc aaa agg	1152
Ser Cys Ser Ser Asn Val Ser Val Ala His Asp Ala Ser Gly Lys Arg	
370 375 380	
gtg tac tac ctc acc cgt gac ccc acc gtc ccc ctt gcg cgg gct gcg	1200
Val Tyr Tyr Leu Thr Arg Asp Pro Thr Val Pro Leu Ala Arg Ala Ala	
385 390 395 400	
tgg gag aca gct agg cac act cca gtc aac tcc tgg cta ggc aac atc	1248
Trp Glu Thr Ala Arg His Thr Pro Val Asn Ser Trp Leu Gly Asn Ile	
405 410 415	
atc atg tat gcg ccc act ttg tgg gca agg atg att ctg atg act cac	1296
Ile Met Tyr Ala Pro Thr Leu Trp Ala Arg Met Ile Leu Met Thr His	
420 425 430	
ttc ttc tcc atc ctt cta gcc cag gag caa ctt gaa aaa gcc ctg gat	1344
Phe Phe Ser Ile Leu Leu Ala Gln Glu Gln Leu Glu Lys Ala Leu Asp	
435 440 445	

FIG. 1C

tgt cag atc tac ggg gct tgt tac tcc att gag cca ctt gac cta cct	1392
Cys Gln Ile Tyr Gly Ala Cys Tyr Ser Ile Glu Pro Leu Asp Leu Pro	
450 455 460	
cag atc att gaa cga ctc cat ggt ctt agc gca ttt tca ctc cat agt	1440
Gln Ile Ile Glu Arg Leu His Gly Leu Ser Ala Phe Ser Leu His Ser	
465 470 475 480	
tac tct cca ggt gag atc aat agg gtg gct tca tgc ctc agg aag ctt	1488
Tyr Ser Pro Gly Glu Ile Asn Arg Val Ala Ser Cys Leu Arg Lys Leu	
485 490 495	
ggg gta cca ccc ttg cga gtc tgg aga cat cgg gcc aga agt gtc cgc	1536
Gly Val Pro Pro Leu Arg Val Trp Arg His Arg Ala Arg Ser Val Arg	
500 505 510	
gct aag tta ctg tcc cag ggg ggg agg gcc gcc att tgt ggc aag tac	1584
Ala Lys Leu Leu Ser Gln Gly Gly Arg Ala Ala Ile Cys Gly Lys Tyr	
515 520 525	
ctc ttc aac tgg gca gta agg acc aag ctt aaa ctc act cca att ccg	1632
Leu Phe Asn Trp Ala Val Arg Thr Lys Leu Lys Leu Thr Pro Ile Pro	
530 535 540	
gct gcg tcc cgg ctg gac ttg tcc ggc tgg ttc gtt gct ggc tac agc	1680
Ala Ala Ser Arg Leu Asp Leu Ser Gly Trp Phe Val Ala Gly Tyr Ser	
545 550 555 560	
ggg gga gac ata tat cac agc ctg tct cgt gcc cga ccc cgc tgg ttc	1728
Gly Gly Asp Ile Tyr His Ser Leu Ser Arg Ala Arg Pro Arg Trp Phe	
565 570 575	
atg ttg tgc cta ctc cta ctc tcc gta ggg gta ggc atc tat cta ctc	1776
Met Leu Cys Leu Leu Leu Ser Val Gly Val Gly Ile Tyr Leu Leu	
580 585 590	
ccc aac cgg cat cac cat cac cat cac	1803
Pro Asn Arg His His His His His His	
595 600	

FIG. 2A

atg gct agc atg tca atg tcc tat aca tgg aca ggc gcc ctg atc aca Met Ala Ser Met Ser Met Ser Tyr Thr Trp Thr Gly Ala Leu Ile Thr 1 5 10 15	48
ccg tgc gct gcg gag gaa agc aag ctg ccc atc aac gcg ctg agc aac Pro Cys Ala Ala Glu Glu Ser Lys Leu Pro Ile Asn Ala Leu Ser Asn 20 25 30	96
tcc ttg ctg cgt cac cat aac ctg gtc tat tcc aca aca tcc cgc agt Ser Leu Leu Arg His His Asn Leu Val Tyr Ser Thr Thr Ser Arg Ser 35 40 45	144
gca agc ctg cgg cag aag aag gtc acc ttt gac aga ctg caa gtc ctg Ala Ser Leu Arg Gln Lys Lys Val Thr Phe Asp Arg Leu Gln Val Leu 50 55 60	192
gac gat cat tac cgg gac gtg ctc aag gag atg aag gcg aag gcg tcc Asp Asp His Tyr Arg Asp Val Leu Lys Glu Met Lys Ala Lys Ala Ser 65 70 75 80	240
aca gtg aag gct aaa ctg cta tct gta gaa gaa gca tgc aag ctg acg Thr Val Lys Ala Lys Leu Leu Ser Val Glu Glu Ala Cys Lys Leu Thr 85 90 95	288
ccc ccg cat tcg gcc aaa tcc aaa ttt ggc tat ggg gca aag gac gtc Pro Pro His Ser Ala Lys Ser Lys Phe Gly Tyr Gly Ala Lys Asp Val 100 105 110	336
cgg agc cta tcc agc agg gcc gtt aac cac atc cgc tcc gtg tgg aag Arg Ser Leu Ser Ser Arg Ala Val Asn His Ile Arg Ser Val Trp Lys 115 120 125	384
gac ttg ctg gag gac act gac aca cca att cag acc acc atc atg gca Asp Leu Leu Glu Asp Thr Asp Thr Pro Ile Gln Thr Thr Ile Met Ala 130 135 140	432
aaa aat gag gtt ttc tgc gtc caa cca gag aaa gga ggc cgc aaa cca Lys Asn Glu Val Phe Cys Val Gln Pro Glu Lys Gly Gly Arg Lys Pro 145 150 155 160	480
gct cgc ctc atc gta ttc cca gac ctg gga gtt cgt gta tgc gag aag Ala Arg Leu Ile Val Phe Pro Asp Leu Gly Val Arg Val Cys Glu Lys 165 170 175	528
atg gcc ctt tac gac gtg gtt tcc act ctt cct cag gcc gtg atg ggc Met Ala Leu Tyr Asp Val Val Ser Thr Leu Pro Gln Ala Val Met Gly 180 185 190	576
tcc tca tac gga ttc caa tac tct cct aag cag cgg gtc gag ttc ctg Ser Ser Tyr Gly Phe Gln Tyr Ser Pro Lys Gln Arg Val Glu Phe Leu 195 200 205	624
gtg aat acc tgg aaa gca aag aaa tgc cct atg ggc ttc tca tat gac Val Asn Thr Trp Lys Ala Lys Lys Cys Pro Met Gly Phe Ser Tyr Asp 210 215 220	672

FIG. 2B

acc cgc tgt ttt gac tca acg gtc act gag aat gac atc cgt gtt gag	720
Thr Arg Cys Phe Asp Ser Thr Val Thr Glu Asn Asp Ile Arg Val Glu	
225 230 235 240	
gag tca att tac caa tgt tgt gac ttg gcc ccc gaa gct aga cag gcc	768
Glu Ser Ile Tyr Gln Cys Cys Asp Leu Ala Pro Glu Ala Arg Gln Ala	
245 250 255	
ata agg tcg ctc aca gag cgg ctc tat gtc ggg ggt ccc atg act aac	816
Ile Arg Ser Leu Thr Glu Arg Leu Tyr Val Gly Gly Pro Met Thr Asn	
260 265 270	
tcc aaa ggg cag aac tgc ggc tat cgc cgg tgc cgc gcg agc ggc gtg	864
Ser Lys Gly Gln Asn Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val	
275 280 285	
ctg acg act agc tgc ggt aat acc ctc aca tgc tac ttg aag gcc gct	912
Leu Thr Thr Ser Cys Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Ala	
290 295 300	
gca gcc tgt cga gct gcc aag ctc cag gac tgc acg atg ctc gtg aat	960
Ala Ala Cys Arg Ala Ala Lys Leu Gln Asp Cys Thr Met Leu Val Asn	
305 310 315 320	
gga gac gac ctt gtc gtt atc tgt gaa agc gcg gga acc caa gag gac	1008
Gly Asp Asp Leu Val Val Ile Cys Glu Ser Ala Gly Thr Gln Glu Asp	
325 330 335	
gcg gca agc cta cga gtc ttc acg gag gct atg act agg tac tct gcc	1056
Ala Ala Ser Leu Arg Val Phe Thr Glu Ala Met Thr Arg Tyr Ser Ala	
340 345 350	
ccc cct ggg gac ccg ccc caa ccg gaa tac gac ttg gag ctg ata aca	1104
Pro Pro Gly Asp Pro Pro Gln Pro Glu Tyr Asp Leu Glu Leu Ile Thr	
355 360 365	
tcg tgt tcc tcc aat gtg tcg gtc gca cac gat gca tct ggc aaa agg	1152
Ser Cys Ser Ser Asn Val Ser Val Ala His Asp Ala Ser Gly Lys Arg	
370 375 380	
gtg tac tac ctc acc cgt gac ccc acc gtc ccc ctt gcg cgg gct gcg	1200
Val Tyr Tyr Leu Thr Arg Asp Pro Thr Val Pro Leu Ala Arg Ala Ala	
385 390 395 400	
tgg gag aca gct agg cac act cca gtc aac tcc tgg cta ggc aac atc	1248
Trp Glu Thr Ala Arg His Thr Pro Val Asn Ser Trp Leu Gly Asn Ile	
405 410 415	
atc atg tat gcg ccc act ttg tgg gca agg atg att ctg atg act cac	1296
Ile Met Tyr Ala Pro Thr Leu Trp Ala Arg Met Ile Leu Met Thr His	
420 425 430	
ttc ttc tcc atc ctt cta gcc cag gag caa ctt gaa aaa gcc ctg gat	1344
Phe Phe Ser Ile Leu Leu Ala Gln Glu Gln Leu Glu Lys Ala Leu Asp	
435 440 445	

FIG. 2C

tgt cag atc tac ggg gct tgt tac tcc att gag cca ctt gac cta cct	1392
Cys Gln Ile Tyr Gly Ala Cys Tyr Ser Ile Glu Pro Leu Asp Leu Pro	
450 455 460	
cag atc att gaa cga ctc cat ggt ctt agc gca ttt tca ctc cat agt	1440
Gln Ile Ile Glu Arg Leu His Gly Leu Ser Ala Phe Ser Leu His Ser	
465 470 475 480	
tac tct cca ggt gag atc aat agg gtg gct tca tgc ctc agg aag ctt	1488
Tyr Ser Pro Gly Glu Ile Asn Arg Val Ala Ser Cys Leu Arg Lys Leu	
485 490 495	
ggg gta cca ccc ttg cga gtc tgg aga cat cgg gcc aga agt gtc cgc	1536
Gly Val Pro Pro Leu Arg Val Trp Arg His Arg Ala Arg Ser Val Arg	
500 505 510	
gct aag tta ctg tcc cag ggg ggg agg gcc gcc att tgt ggc aag tac	1584
Ala Lys Leu Leu Ser Gln Gly Gly Arg Ala Ala Ile Cys Gly Lys Tyr	
515 520 525	
ctc ttc aac tgg gca gta agg acc aag ctt aaa ctc act cca att ccg	1632
Leu Phe Asn Trp Ala Val Arg Thr Lys Leu Lys Leu Thr Pro Ile Pro	
530 535 540	
gct gcg tcc cgg ctg gac ttg tcc ggc tgg ttc gtt gct ggc tac agc	1680
Ala Ala Ser Arg Leu Asp Leu Ser Gly Trp Phe Val Ala Gly Tyr Ser	
545 550 555 560	
ggg gga gac ata tat cac agc ctg tct cgt gcc cga ccc cgc cat cac	1728
Gly Gly Asp Ile Tyr His Ser Leu Ser Arg Ala Arg Pro Arg His His	
565 570 575	
cat cac cat cac	1740
His His His His	
580	

FIG. 3

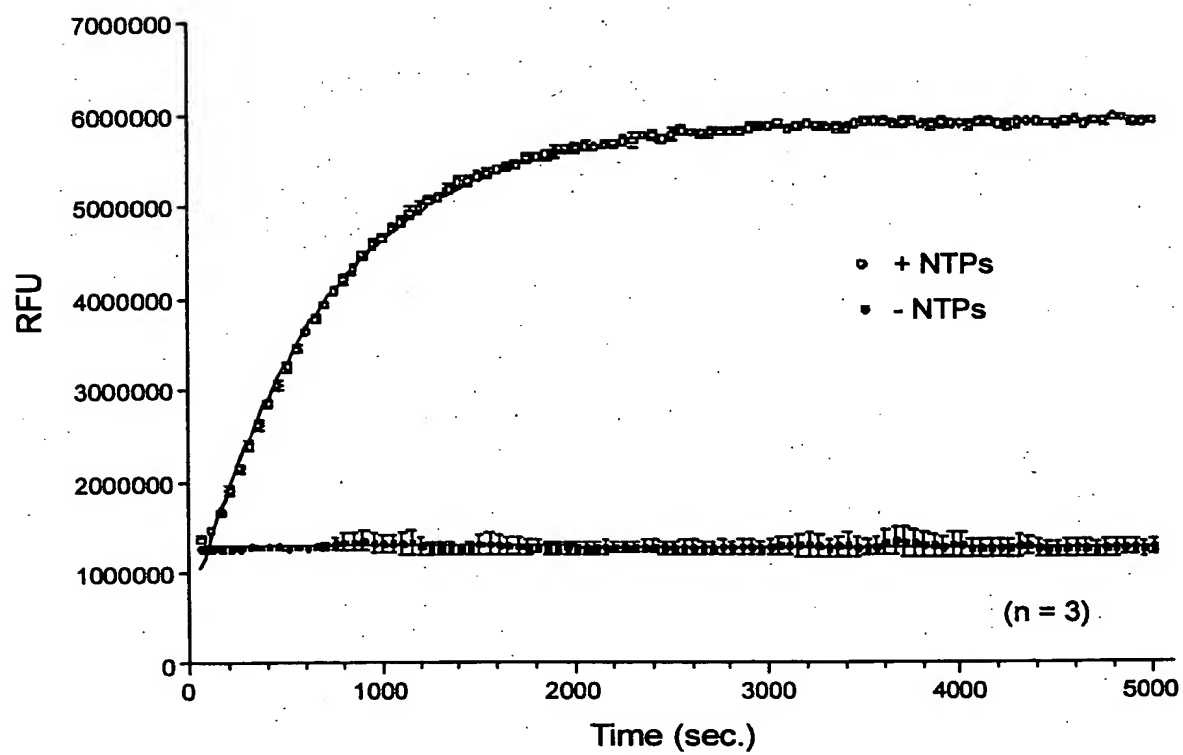


FIG. 4

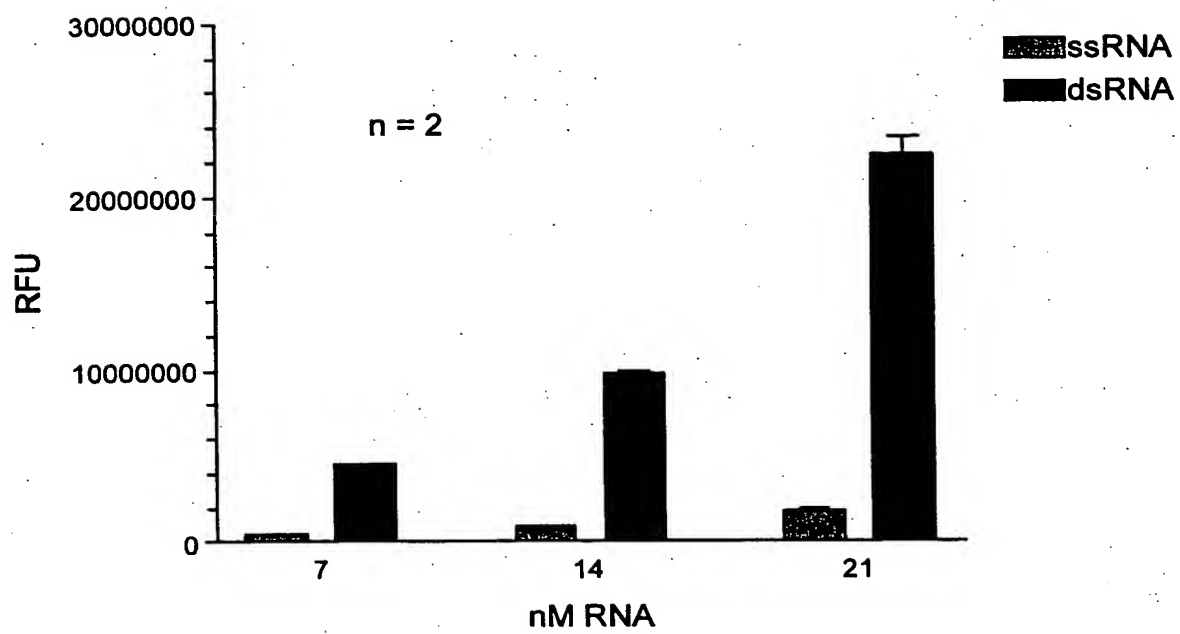


FIG. 5A

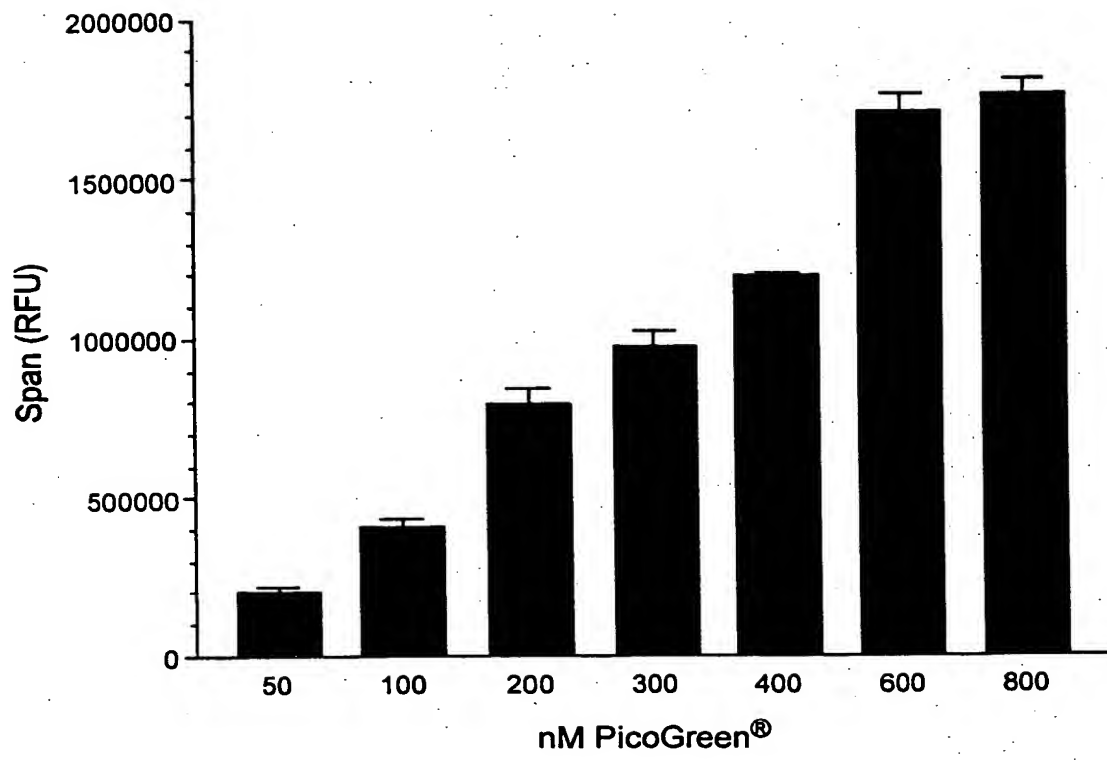


FIG. 5B

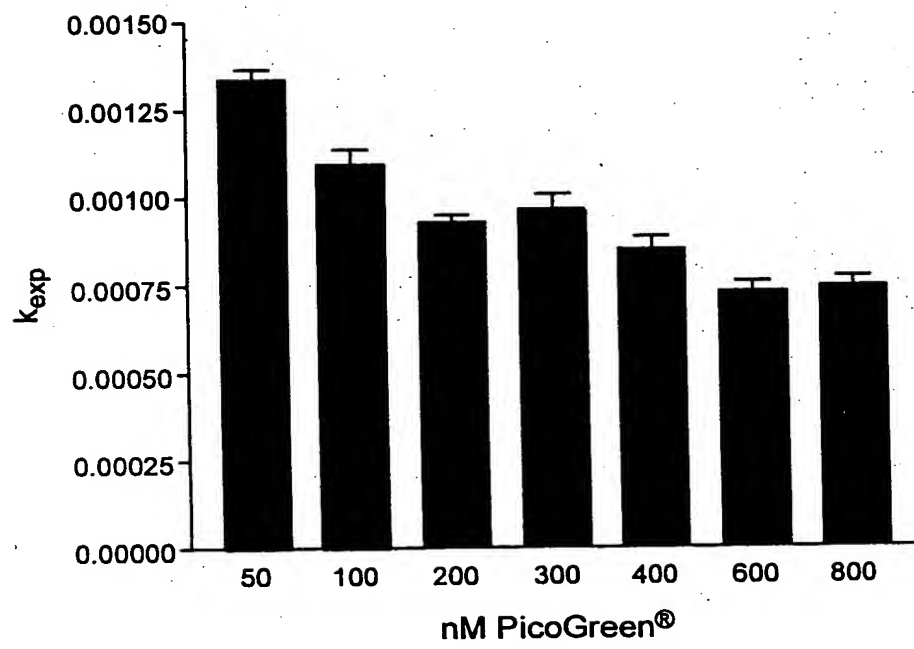


FIG. 5C

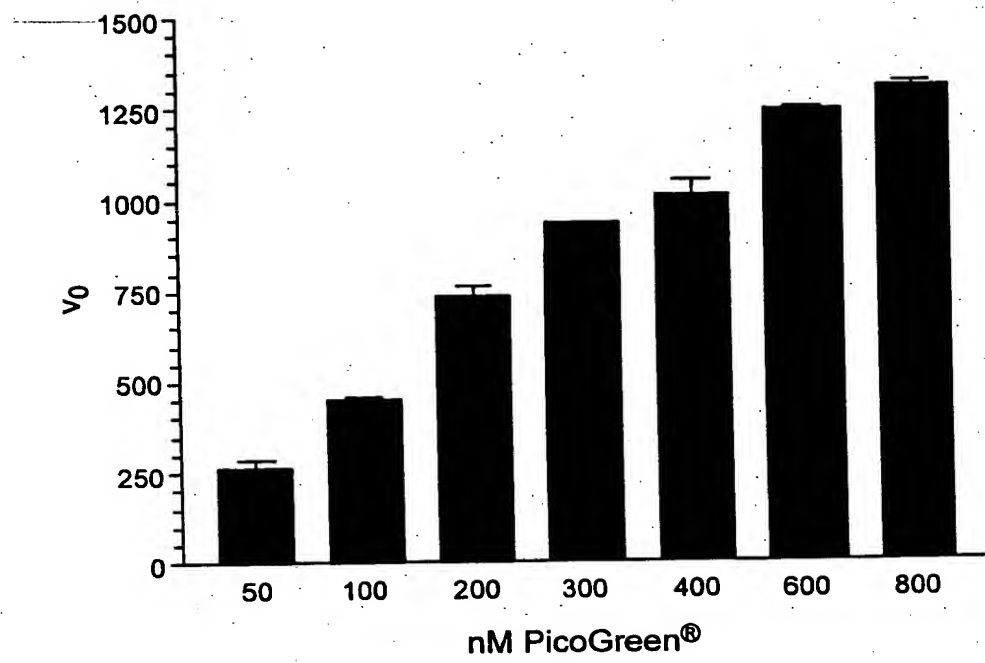


FIG. 6

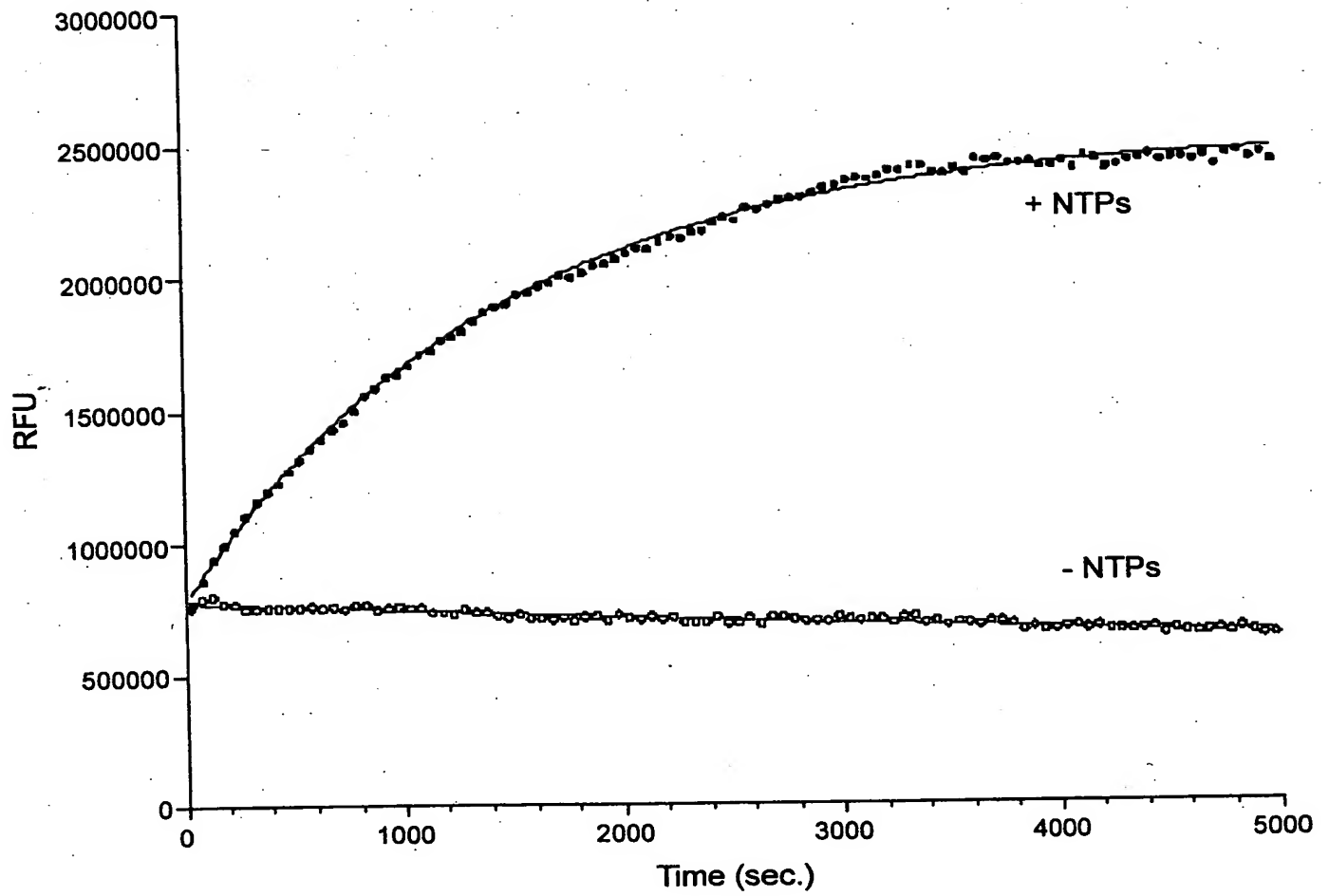


FIG. 7

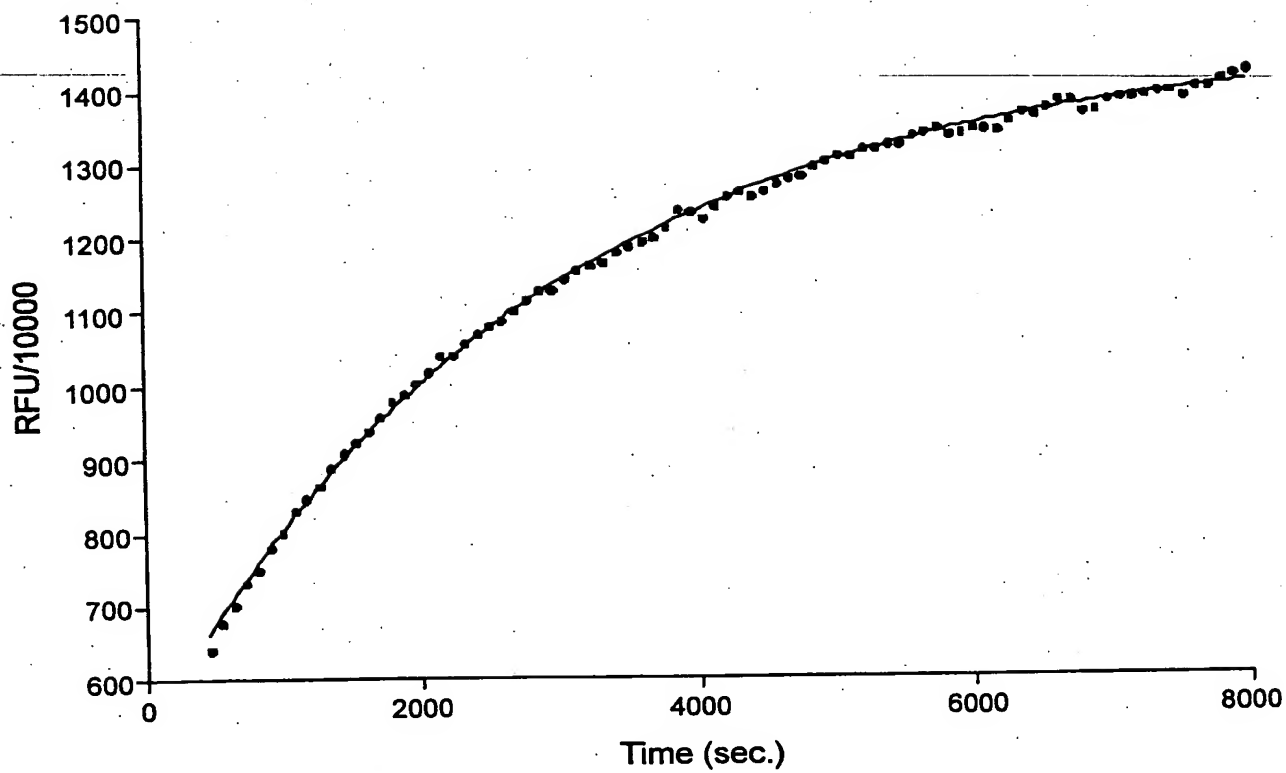


FIG. 8

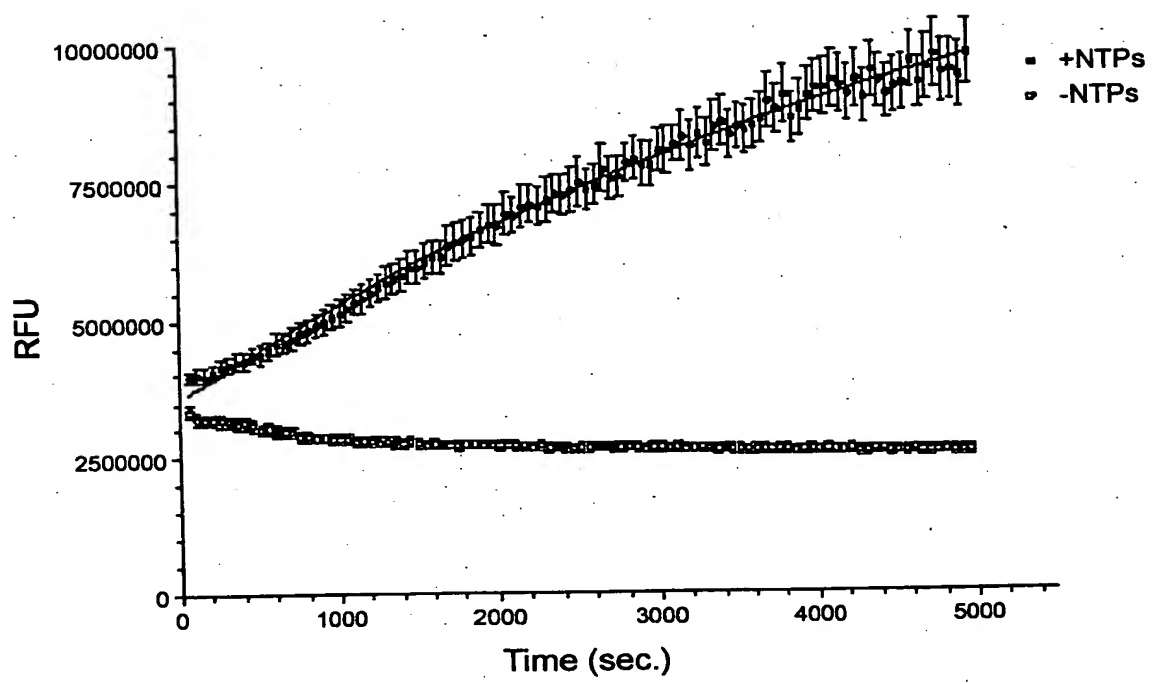


FIG. 9

